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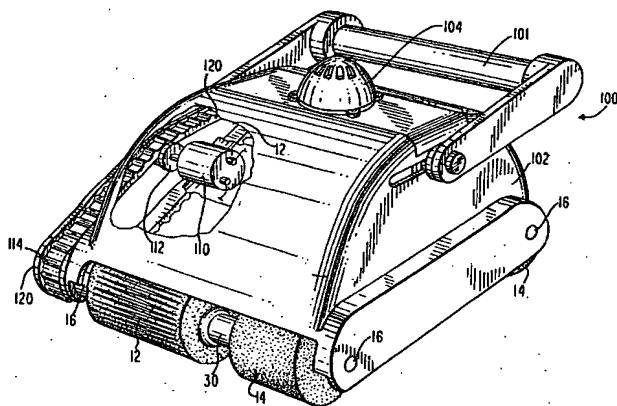
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(54) Title: DIRECTIONAL CONTROL FOR DUAL BRUSH ROBOTIC POOL CLEANERS



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(57) Abstract: A self-propelled robotic pool cleaner (100) has a first pair of driven brushes (12, 14) and second pair of free brushes co-axially mounted for rotation on axles (16) at the opposite ends of the pool cleaner that are transverse to the direction of movement. The first pair of brushes are mounted on one side and are driven by a drive motor (110); the second pair of brushes are mounted on the opposite side of the cleaner. A rotational delay clutch (30) is co-axially positioned between each pair of the first and second brushes so that reversing the drive motor causes the first pair of driven brushes to temporarily rotate at an angular rotational velocity that is greater than that of the second pair of brushes, thereby pivoting the pool cleaner through a predetermined angular change in direction before the synchronous rotation of the second pair of dual brushes is initiated by the engagement of the clutch. Following each reversal, the pool cleaner moves in a new direction along a generally straight path that is angularly displaced from its prior path. A highly efficient cleaning program permits the use of a battery to power the drive and water pump motors in pool cleaners that ascend the side walls as well as cleaning the bottom surface.



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